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ABSTRACT

A brief description, analysis, and history of a self-instructional system to teach high school students the basic skills used in public speaking is presented. Instructional procedures in the system generally follow a two-step sequence: the student first views a film and then either a) progresses through a corresponding unit of programed material or b) performs an activity related to the film. Student performance is evaluated by the instructor/manager in accordance with a set of criteria which are included in the system. The system criteria are summarized on the composite evaluation sheet, included here. The sheet is used by the instructor/manager to record student achievement. Achievement data available from laboratory and field tests indicate that students demonstrate substantial gains in knowledge through use of the system. Attitudes of students and teachers towards the system were found to be positive. (Programed material is not included in this booklet.) (JK)

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Research and Evaluation Division

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A Self-Instructional System in Speech

Northwest
Regional
Educational
Laboratory



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PREFACE

This document is the second in a series of technical reports issued by the Research and Evaluation Division of the Northwest Regional Educational Laboratory. The reports are published to provide people outside the Laboratory, e. g. , funding personnel, potential users and professional colleagues, with data to indicate the quality of Laboratory products.

This second report is a brief description, analysis and history of a self-instructional system in speech. Laboratory work on the system has been done in the program to improve instruction in small schools.

Authors of the report are Mark M. Greene, Staff Specialist, Research and Evaluation Division, and Chester A. Hausken, Coordinator, Small Schools Program.

J. E. Seger, Director
Research and Evaluation
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DESCRIPTION OF THE SYSTEM

Instructional Objectives

The purpose of the instructional system in speech is to teach high school students the basic skills used in public speaking. The system has been designed for use by the class as a whole or for use by individual students.

Following are the objectives of the instruction in the system:

To stand in a relaxed and erect manner when speaking before an audience

To establish and maintain eye contact with an audience

To speak with enough volume to be heard by everyone in the audience

To use gestures and bodily movement appropriate to conveying specific ideas and emotions

To use gestures and bodily movement effectively, i. e., head, hands, shoulders, facial expressions, walking

To speak with careful pronunciation and proper enunciation

To use pauses for punctuation and emphasis of words and ideas

To vary the pitch of the voice while using a rate of speed appropriate to the material

To identify the introduction, body and conclusion in speeches presented in written form and to explain the function of each section

To use correct outlining techniques for speeches presented in written form

To prepare a demonstration speech and develop appropriate illustrative materials

To deliver a three to five minute demonstration speech using appropriate bodily movements, voice control and eye contact while effectively utilizing illustrative materials

To participate effectively in a symposium which involves a cooperative presentation on one subject; use correct outlining techniques, bodily movements and voice control while introducing material which integrates with that of the other participants

Instructional Equipment and Materials

The instructional system in speech utilizes the following materials and equipment:

Projector--Mark IV, Fairchild

Seven films

Wollensak tape recorder

Audiotronic HS1 headset with ear cushions

Two audio tapes

Two blank tapes

Student booklet*

Instruction/Manager Guide*

Composite Evaluation Sheet

*Gallegos, Arnold M. An Instructional System in Beginning Speech.
Anatone and Pullman: Anatone School District and The Department
of Education, Washington State University, 1968.

Handout materials

Inaugural Address of President John F. Kennedy

Preparing a Speech--Answer Sheet

Pantomime Situations

Pronunciation and Enunciation Guide

Instructional Procedures

Instructional procedures in the system generally follow a two-step sequence: the student first views a film and then either (a) progresses through a corresponding unit of programmed material or (b) performs an activity related to the film previously viewed.

Student performance is evaluated by the instructor/manager in accordance with a set of criteria which are included in the system. The system criteria are summarized on the Composite Evaluation Sheet (see Appendix A). The sheet is used by the instructor/manager to record student achievement.

STUDIES OF THE SYSTEM

Dale Study

The original developmental work on the instructional speech system was conducted at Washington State University by Dr. Elwin Dale. Dale's project report* summarizes his study of the system.

The Dale study centered on the performance of seven students who worked through the first nine units of the speech system. The study sample consisted of seven high school girls--six freshmen and one sophomore.

Dale provided a high school teacher with the materials used in the system. He instructed the teacher to operate the system in accordance with the directives listed in the Instructor/Manager Guide. No time limits were specified for the completion of any of the objectives. However, students could proceed only after each objective had been satisfactorily completed.

Dale utilized two major lines of evidence in assessing the system. The first derives from the Composite Evaluation Form (CEF) which was completed by the teacher while observing student demonstration speeches. All students were eventually successful in completing all system objectives; the

*Dale, Elwin Lawrence. The Development and Evaluation of a System for Speech Instruction in a Small High School. Pullman: Department of Education, Washington State University, 1968.

exception was the symposium, which was not observed. Dale reported that 57 percent of the objectives listed on the CEF were completed on a single learning trial by the seven students. On the other hand, 43 percent of the objectives on the CEF required two or more learning trials prior to successful completion.

The second major line of evidence used by Dale involved ratings of pre- and post-videotape recordings of student speeches. The ratings of seven judges encompassed only six of the system objectives. The judges' ratings are summarized in Figure 1. In order to simplify the presentation, a "majority rule" measure has been adopted, i. e. , where the judges did not render a unanimous decision concerning the successful attainment of an objective, the opinion given by the majority has been recorded.

Inspection of Figure 1 reveals that, in the opinion of the majority of the judges, none of the students achieved all of the objectives on the pretest. Further, none of the students succeeded initially on four of the six objectives and only two of the students attained the desired results on the remaining two objectives. With regard to posttest results it is evident that most of the students completed most of the objectives to the satisfaction of the majority of judges.

While the size of the sample severely restricts statistical analyses of the data, inspection of Figure 1 suggests that several dramatic changes in student performance were effected by use of the speech system.

In comparing Dale's two lines of evidence, it is apparent that the teacher was more lenient than the judges in ratings of student performances. Thus, while the teacher rated all of the students as successful, the judges rated only three of the students as successful. As suggested by Dale, the disparity in ratings between teacher and judges might well reside in the difference in professional qualifications, i. e. , the teacher was not certified to teach speech, whereas the judges were members of the Speech Department of Washington State University (Pullman).

Northwest Regional Educational Laboratory Field Test Data

Achievement Data

For purposes of the present study, speech performance data--based on the Composite Evaluation Sheet--were obtained from two separate groups of high school students in the Laboratory's rural test sites. The control group consisted of twenty-eight students--eighteen boys and ten girls. None of the control group had participated in the speech system at the time of testing. Students in this sample were considered typical of students for whom the system was designed, i. e. , ninth grade students in rural high schools with no previous formalized training in speech. The students gave demonstration speeches which were observed by experienced high school speech teachers. Each of the two observing teachers had used the speech system for at least one academic year.

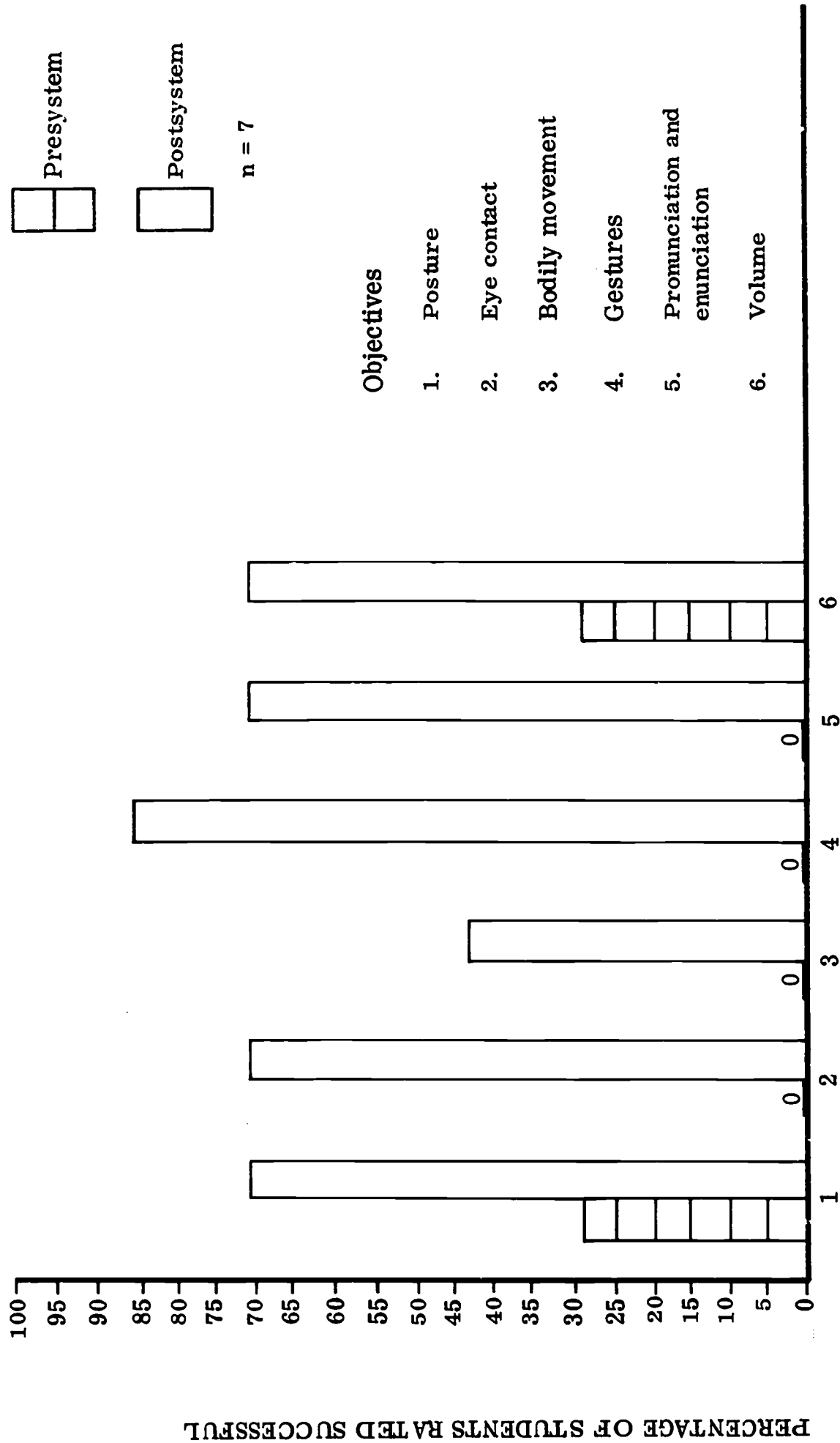


Fig. 1. Judges' pre-and postratings of student success on speech system objectives.

Data for the second group of students, the experimental group, were derived from available records of students who had completed the speech system within the previous academic year at one of the Laboratory's rural test sites. Relatively complete data were available for ten students--seven boys and three girls. As with the control group, basic data consisted of teachers' ratings of demonstration speeches and they used the CEF as a basis for ratings.

In analyzing the data, comparisons were made on nine of the ten objectives listed on the CEF. Lack of available data prevented group comparisons on the final objective, i. e. , the objective relating to the symposium.

The basic findings of the study are presented in Figure 2. The percentage of students who were rated successful on each of nine objectives is summarized for both the experimental and control groups.

Because the observers were not consistent in reporting student performances on each objective, the base number for each group varies across objectives.

Students in the experimental group tended to receive successful ratings more frequently than their counterparts in the control group. That is, the median percentage of successful ratings across the nine objectives was 90 for the experimental group and 56 for the control group. Furthermore, attainment for the experimental group on three of the objectives was rated

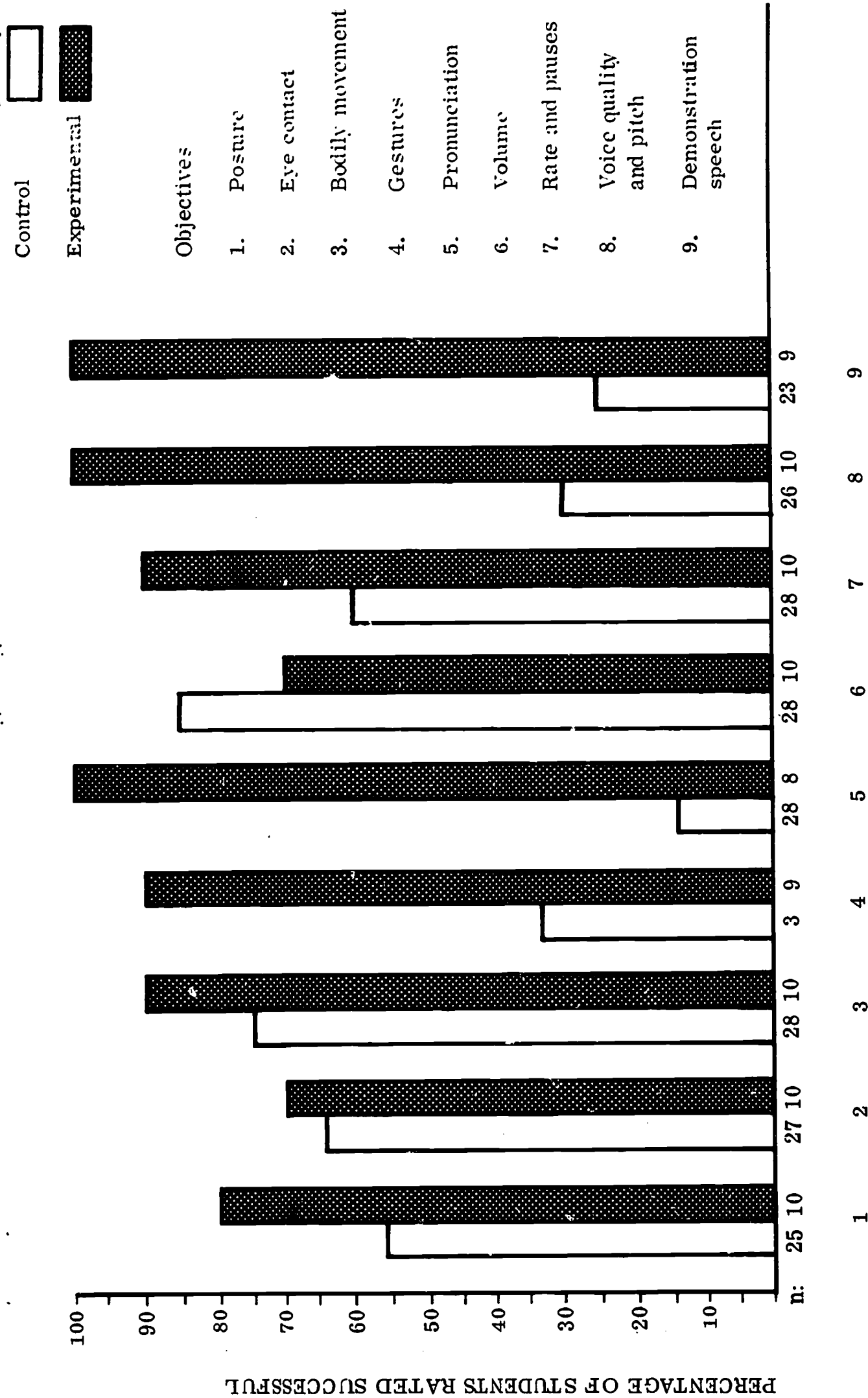


Fig. 2. Percentage of experimental and control groups rated successful on speech system objectives.

successful for 100 percent of the students. The control group received higher ratings than the experimental group only on objective six, effective use of volume, although the difference in performance was not found to be statistically significant.

In comparing relative performances of the two groups, Fisher's exact test was employed. Statistically significant differences in the ratings for the two groups were found in four instances. In each of these, the significant differences favored the experimental group. The four objectives showing significant differences were:

		<u>Differences Significant at .01 level</u>
Objective 5 -	Correct pronunciation and enunciation	$p < .01$
Objective 7 -	Utilization of rate and pauses when speaking	$p < .05$
Objective 8 -	Utilization of variations in voice pitch when speaking	$p < .01$
Objective 9 -	Preparation of a demonstration speech and development of appropriate illustrative materials	$p < .01$

Ratings for one additional objective, i. e. , posture, approached but did not reach statistical significance.

When comparing the results of the Dale study to those of the Laboratory study, it is apparent that the baseline data for the two studies are disparate. The most plausible explanation is that the standards of the two groups of judges differed. In general, however, the results of both studies suggest that

speech performance is enhanced significantly in at least four areas through use of the speech system.

Affective Data

During the spring of 1969, an opinion survey was conducted among students and teachers using the speech system at eight rural test sites in Washington, Oregon, Idaho, Montana and Alaska. Students were polled about their attitudes toward the speech system. One question asked was, "Would you recommend this system to your friends?" Eighty-four of the 99 respondents, or 84.8 percent, replied in the affirmative.

Another question asked was, "Would you be interested in taking another course using a system like this one?" Fifty-four of the 64 respondents, or 84.3 percent, replied in the affirmative. These data would seem to indicate positive student acceptance of the system.

Teacher/managers of the speech system were asked to respond to an opinion questionnaire at the same time student attitudes were polled. One question asked was, "Would you recommend this system to other teachers?" All eight respondents answered in the affirmative. This finding, based on all teacher/managers of the speech system in the Laboratory's test sites, would seem to indicate positive teacher acceptance of the system.

Summary

Achievement data available from the Dale study and the Northwest Regional Educational Laboratory's rural test sites indicate that students

demonstrate substantial gains in knowledge through the use of the instructional system in speech. Attitudes of students and teachers toward the system were found to be quite positive.

EDUCATIONAL SPECIFICATIONS OF THE SYSTEM

<u>Systems focus:</u>	Introductory material in public speaking at senior high or junior high school level
<u>Instructional mode:</u>	Group mode with provisions for individual use; students view filmed demonstration speeches and give speeches using the practice material provided in the system
<u>Student performance:</u>	Measured by a teacher rating form, an average of 90 percent of the students successfully completed nine out of ten objectives; completion time has ranged from two to twenty weeks per student with a modal reported time of nine weeks (N=60).

HISTORY OF THE SYSTEM

Dr. Gordon McCloskey of Washington State University (Pullman) initiated a Vocational-Technical Education Research and Development Project in 1966. The project identified and defined clusters of capabilities essential for occupations often chosen by youth who do not complete college. Also identified were the psychological, sociological and economic factors that influenced students to seek educational programs for training in skills essential for employment. The information from the project supplied the basis for the design of prototype vocational instructional materials.

The Elementary and Secondary Education Act of 1965 gave further impetus to the Vocational Project with funds available under Title III and the involvement of the Northwest Regional Educational Laboratory, established under Title IV. Cooperative efforts resulted in the identification, development and field testing of vocational instructional systems for plastics, speech, welding, Spanish, mathematics analysis, physical science and electricity.

Personnel directly involved in the speech project include:

Washington State University: Gordon McCloskey, Arnold Gallegos, Elwin Lawrence Dale, Robert Salsbury, Janice Miller, Richard Thornton, Robert Vogelsang and Dennis Gillis.

Northwest Regional Educational Laboratory: Roger Bishop, Chester Hausken, Walter Hartenberger, Ray Jongeward, Mark Greene, Joan Goforth, Al Selinger, Mary Ganzel, Dan Stephens and Gail Murray.

APPENDIX A: COMPOSITE EVALUATION SHEET

Date _____

Speech _____

OBJECTIVES TO BE EVALUATED	SUCCESSFUL		SUGGESTIONS
	YES	NO	
1. <u>Posture</u> Relaxed - natural Erect - stands tall Weight evenly distributed			
2. <u>Eye-Contact</u> Looks alternately at all members of small group			
3. <u>Volume</u> Speaks loudly enough to be heard by everyone in the audience			
4. <u>Effective Gestures</u> (through pantomime) 2/3 of students correctly describe pantomime			
5. <u>Effective Gestures for Emphasis</u> Sufficient gestures Appropriate gestures Natural gestures Walking			
6. <u>Intelligibility Through Correct Pronunciation and Enunciation</u> Words, phrases and sentences were intelligible to audience			
7. <u>Pauses, Rate of Speech and Pitch</u> Uses pauses to emphasize important points and for punctuation Uses appropriate rate for selection read Varies pitch when speaking to an audience			

APPENDIX A: COMPOSITE EVALUATION SHEET (continued)

OBJECTIVES TO BE EVALUATED	SUCCESSFUL		SUGGESTIONS
	YES	NO	
8. <u>Outlining</u> Follows form taught in booklet and properly identifies main topics and subtopics			
9. <u>Use of Audio-Visual Aids</u> Uses illustrative materials effectively			
10. <u>Symposium</u> Integrates material with what has preceded or follows			